Comparative cost effectivness of various Types of power projects

*77. SHRIMATI SUDHA VIJAY JOSHI: Will the Minister of ENERGY be pleased to state:

(a) whether any study has been made regarding the comparative cost effectiveness in the generation of power through hydel, thermal and natural gas;

(b) if so, whether such a study reveals that gas based projects are most cost effective; and

(c) whether any special thrust is being given for the implementation of gas based projects?

THE MINISTER OF STATE IN THE DEPARTMENT OF POWER IN THE MINISTRY OF ENERGY (SHRI KALPNATH RAI): (a) and (b) No specific study has been carried out by the Central Electricity Authority (CEA) regarding the cost of generation of electricity from various sources. However, the cost of generation of power projects is assessed by the CEA during the techno-economic appraisal of the projects. The cost of generation varies from project to project and depends upon several factors such as the quantum of civil works and the load factor of operation of hydel projects, and in the case of thermal projects, the location and the type of plant and equipment, size of units type of fuel, its cost; and the hours of operation in a year. The estimated cost of generation of hydel and coal/gas based thermal power projects recently appraised in the CEA are as follows:—

Type of generation project	Approximate cost of power per unit
1. Hydel	19 to 80 paise/KWh
2. Coal based thermal	41 to 90 paise/KWh
3. Gas based thermal	36 to 87 paise/KWh

(c) Yes, Sir; gas based power projects have short gestation period and are being set up depending *inter alia* upon the availability of gas on a sustained basis.

Demand and supply of coal

*78. SHRI ISH DUTT YADAV:
SHRI VIRENDRA VERMA:

Will the Minister of ENERGY be pleased to state:

(a) what is the total investment so far made in the coal sector in the country since nationalisation;

(b) by what percentage the output-per-manshift has increased/decreased during the years 1985, 1986 and 1987 and what are the reasons for the decline if any, in its productivity; and

(c) what was the estimated gap between demand and supply of coal at the end of 1987 and what remedial measures are contemplated by Government in this regard?

THE MINISTER OF ENERGY (SHRI VASANT SATHE): (a) Total investment (Equity + Loan) made in Coal India Limited by the Central Government upto 31.3.1988 was of the order of Rs. 7236.12 crores (excluding the effect of repayments made during 1987-88).

(b) The Output per manshift (OMS) in Coal India Ltd., during the year 1985-86, 1987-88 are indicated below:—

Year	OMS (Tonnes)	% increase over the previous year
1985-86	0.92	5.7
1986-87	0.99	7.6
1987-88	1.08	9.00